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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,208	04/04/2005	Ryutaro Yamanaka	L9289.05121	9601

24257 7590 08/01/2008

STEVENS DAVIS LLP
1615 L STREET NW
SUITE 850
WASHINGTON, DC 20036

EXAMINER	
YOUNG, JANELLE N	

ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
08/01/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/530,208	YAMANAKA ET AL.	
	Examiner	Art Unit	
	Janelle N. Young	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 April 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 13, 2008 has been entered.

Response to Amendment

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-12 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dapper (US Patent 6487405) and further in view of Schmidt (US Patent 7142882).

As for claim 1, Dapper teaches a telecommunication system; which reads on claimed communication apparatus, comprising:

a radio section that receives a radio frequency; which reads on claimed radio signal, to convert into a digitized signal; which reads on claimed baseband signal; a baseband signal processor that is reconfigurable to execute processing on the

baseband signal; and a reconfiguring section that reconfigures the baseband signal processor, wherein the reconfiguring section reconfigures only a portion of the baseband signal processor, the portion executing operation processing different among a plurality of radio communication systems and processing that is different among the plurality of radio communication systems on the baseband signal (Col. 35, lines 55-60; Col. 37, lines 17-39; Col. 39, lines 11-24; and Col. 11, lines 41-51 of Dapper).

What Dapper does not explicitly teach is a communication apparatus that is adaptable and reconfigurable of different radio communication systems.

However Schmidt teaches a communication apparatus wherein: a reconfiguring section that reconfigures only a portion in the baseband signal processor that executes the processing that is different among the plurality of radio communication systems the ~~second baseband~~ signal processor based on programming data of a new radio communication system upon switching of radio communication systems. (Fig. 1 & 2; Abstract; Col. 1; line 46-Col. 3, line 3; and Col. 4, line 40-Col. 5, line 2 of Schmidt).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a multi-mode wireless device on a single substrate includes an analog portion and a digital portion integrated on the single substrate as taught by Schmidt, in the method for controlling a plurality of service units in a telecommunication system with a multi-carrier transmission scheme of Dapper, because Dapper already teaches a method for controlling a plurality of service units in a telecommunications system with a multi-carrier telephony transport, making it capable of providing different communication services (Col. 1, lines 27-31 of Dapper).

The motivation of this combination would provide a seamless dual-mode network integrated circuit that operates with a plurality of distinct and unrelated communications standards and protocols such as Global System for Mobile Communications (GSM), General Packet Radio Service (GPRS), Enhance Data Rates for GSM Evolution (Edge) and Bluetooth.TM., as taught by Schmidt in Col. 4, line 40-Col. 5, line 2.

As for claim 2, Dapper teaches a communication apparatus, wherein portion in the baseband signal processor that executes the processing that is different among the plurality of radio communication systems ~~baseband signal processor~~ comprises: a synchronization section that establishes synchronization of communications, and a compensator that corrects amplitude or a phase of the baseband signal, and the synchronization section and the compensator are reconfigurable (Col. 37, lines 17-63; Col. 57, line 58-Col. 58, line 36; and Col. 59, lines 1-29 of Dapper).

As for claim 3, Dapper teaches a communication apparatus, wherein the portion in the ~~second~~ baseband signal processor that executes the processing that is different among the plurality of radio communication systems comprises an FFT section that executes orthogonal transform on the baseband signal, and the reconfiguring section reconfigures a processing portion of the FFT section, the processing portion varying with the number of items of data subjected to the orthogonal transform (Col. 3, lines 14-25; Col. 10, lines 6-44; and Col. 29, lines 8-21 of Dapper).

As for claim 4, Dapper teaches a communication apparatus, wherein the synchronization section determines synchronization timing using a baseband signal obtained by demodulating a signal mapped on a subcarrier by the orthogonal transform

in the FFT section (Col. 3, lines 14-25; Col. 10, lines 6-44; Col. 10, lines 19-48; and Col. 29, lines 8-21 of Dapper).

As for claim 5, Dapper teaches a communication apparatus, wherein the portion in the ~~second~~ baseband signal processor that executes the processing that is different among the plurality of radio communication systems comprises a correlation section that executes correlation processing of the baseband signal, and the reconfiguring section reconfigures a combination of operations in the correlation section (Col. 52, line 3-Col. 53, line 2).

As for claim 6, Dapper teaches a communication apparatus, wherein the synchronization section determines synchronization timing using a result of the correlation processing of the baseband signal in the correlation section (Col. 28, lines 12-30 and Col. 52, line 3-Col. 53, line 2 of Dapper).

As for claim 7, Dapper teaches a communication apparatus, wherein the portion in the ~~second~~ baseband signal processor that executes the processing that is different among the plurality of radio communication systems comprises an error controller which performs error correction of the baseband signal or a retransmission request when the baseband signal has an error, and the reconfiguring section reconfigures a processing portion of the error controller, the processing portion different among a plurality of error correction systems or error detection systems (Col. 53, lines 44-52 of Dapper).

As for claim 8, Dapper teaches a communication apparatus, further comprising: a storage section that stores a result of processing of the error controller, wherein the

reconfiguring section reconfigures connection with an output destination of content stored in the storage section (Col. 45, line 49-Col. 46, line 6 of Dapper).

As for claim 9, Dapper teaches a communication apparatus, wherein the reconfiguring section acquires information required for reconfiguration from the radio signal received in the radio section to reconfigure the portion in the ~~second~~ baseband signal processor that executes the processing that is different among the plurality of radio communication systems (Col. 9, lines 21-45; Col. 14, lines 7-14; and Col. 19, lines 19-48 of Dapper).

As for claim 10, Dapper teaches a communication apparatus, further comprising: an interface section that reads out data stored in the storage section, wherein the reconfiguring section acquires information required for reconfiguration from the storage section via the interface section to reconfigure the portion in the ~~second~~ baseband signal processor that executes the processing that is different among the plurality of radio communication systems (Col. 9, lines 21-45 and Col. 91, line 58-Col. 92, line 29 of Dapper).

As for claim 11, Dapper teaches a communication apparatus, further comprising: an interface section that receives information required for reconfiguration, in wired connection, wherein the reconfiguring section acquires the information required for reconfiguration from the storage section via the interface section to reconfigure the portion in the ~~second~~ baseband signal processor that executes the processing that is different among the plurality of radio communication systems (Col. 9, lines 21-45 and Col. 91, line 58-Col. 92, line 29 of Dapper).

As for claim 12, Dapper teaches a communication apparatus, further comprising: an interface section that receives information required for reconfiguration, in specific power-saving radio communications, wherein the reconfiguring section acquires the information required for reconfiguration from the storage section via the interface section to reconfigure the portion in the ~~second~~ baseband signal processor that executes the processing that is different among the plurality of radio communication systems (Col. 47, line 41-Col. 48, line 9; Col. 69, line 57-Col. 67, line 36; Col. 91, lines 40-57; and Col. 113, line 49-Col. 114, line 4 of Dapper).

Regarding claim 17, see explanation as set forth regarding claim 1 (apparatus claim) because the claimed method for reconfiguring a digital signal processing section would perform the apparatus steps.

3. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dapper (US Patent 6487405) and Schmidt (US Patent 7142882) as applied to claim 1 above, and further in view of Buhrmann et al. (US Patent 5854984).

As for claim 13, Dapper teaches a communication apparatus, further comprising: a radio-section communication section that relays communications between the radio section and the baseband signal processor; and a CPU communication section that relays communications between the baseband signal processor and the reconfiguring section (Col. 35, lines 55-60; Col. 37, lines 17-39; Col. 39, lines 11-24; and Col. 11, lines 41-51 of Dapper).

What Dapper does not explicitly teach is a communication apparatus that is adaptable and reconfigurable of different radio communication systems and a communication apparatus being attachable/detachable.

However Schmidt teaches a communication apparatus wherein: a reconfiguring section that reconfigures only a portion in the baseband signal processor that executes the processing that is different among the plurality of radio communication systems the ~~second baseband~~ signal processor based on programming data of a new radio communication system upon switching of radio communication systems. (Fig. 1 & 2; Abstract; Col. 1; line 46-Col. 3, line 3; and Col. 4, line 40-Col. 5, line 2 of Schmidt).

However Buhrmann et al. teaches a communication apparatus having a baseband signal processor is attachable/detachable (Fig. 1 & 4; Col. 6, lines 49-60, 59-64; Col. 4, lines 29, 39-42; and Col. 9, lines 20-31 of Buhrmann et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate the radio telephone with a detachable pager system including a radio telephone handset and a pager that detachably mounts to the telephone handset as taught by Buhrmann et al., in the communication system of Dapper, because Dapper already teaches A method for controlling a plurality of service units in a telecommunications system with a multi-carrier telephony transport, making it capable of providing pager service and wireless telephone communications (Col. 1, lines 27-31 of Dapper).

The motivation of this combination would be the effect of telecommunications system with a multi-carrier telephony transport on the radio telephone with detachable

pager system is that power consumption of the system is minimized, the power used at the remote units for the transport of data are all in one system, as taught by Dapper in Col. 1, lines 34-41, because as demand for wireless service grows so will capacity. A radio telephone and pager system includes a radio telephone handset and a pager that detachably mounts to the handset. The pager employs a transceiver that provides both paging service, such as a messaging service, and radio telephone service, such as cellular service, when the pager is mounted. In addition, the transceiver provides the pager service when the pager is detached (Abstract of Buhrmann et al.).

The incorporation of the telecommunications system with a multi-carrier telephony transport with the radio telephone/page achieves a reduction in a number of components while enabling subscribers to use a single telephone system to provide both devices and both programs/services/system (Abstract and Col. 1, lines 48-56 of Buhrmann et al.).

As for claim 14, Buhrmann et al. teaches a communication apparatus, further comprising: an attaching/detaching detector that detects attaching/detaching of the baseband signal processor; and a first power source supplier, which supplies power to the radio section, and when detaching of the baseband signal processor is detected, halts supply of the power to the radio section (Col. 6, lines 4-35 of Buhrmann et al.).

4. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dapper (US Patent 6487405) and Schmidt (US Patent 7142882) as applied to claim 1

above, and further in view of Buhrmann et al. (US Patent 5854984) and Silver et al. (US Patent 5828949).

As for claims 15-16, Dapper teaches a communication apparatus, further comprising: a radio communication section that performs radio communications(Col. 35, lines 55-60; Col. 37, lines 17-39; Col. 39, lines 11-24; and Col. 11, lines 41-51 of Dapper).

What Dapper does not explicitly teach is a communication apparatus being attachable/detachable and a communication apparatus that is adaptable and reconfigurable of different radio communication systems.

However Schmidt teaches a communication apparatus wherein: a reconfiguring section that reconfigures only a portion in the baseband signal processor that executes the processing that is different among the plurality of radio communication systems the ~~second baseband~~ signal processor based on programming data of a new radio communication system upon switching of radio communication systems. (Fig. 1 & 2; Abstract; Col. 1; line 46-Col. 3, line 3; and Col. 4, line 40-Col. 5, line 2 of Schmidt).

Buhrmann et al. teaches a communication apparatus having a baseband signal processor is attachable/detachable (Fig. 1 & 4; Col. 6, lines 49-60, 59-64; Col. 4, lines 29, 39-42; and Col. 9, lines 20-31 of Buhrmann et al.), an application section that performs display, replay and edition of data of image, music and mail (Col. 3, lines 1-14; Col. 4, lines 25-40; Col. 5, line 60- Col. 6, line 3; Col. 6, line 61-Col. 7, line 6; and Col. 7, lines 17-34 of Buhrmann et al.), and a connector that relays communications between the radio communication section and the application section, wherein the radio

communication section and the application section are separable, the radio communication section comprises a radio-section communication section that relays communications between the radio section and the baseband signal processor, a CPU communication section that relays communications between the baseband signal processor detachable and the reconfiguring section (Abstract; Col. 1, lines 48-56; Col. 3, lines 1-25; Col. 3, line 63-Col. 4, line 24; and Col. 5, line 3-Col. 7, line 33 of Buhrmann et al.).

What Dapper and Buhrmann et al. do not explicitly teach is a communication apparatus having two respectable CPUs.

However Silver et al. teaches a communication apparatus having a first CPU, an attaching/detaching detector that detects attaching/detaching of the baseband signal processor, a first power source supplier which supplies power to the radio section, and when detaching of the baseband signal processor is detected, halts supply of the power to the radio section, and an application communication section that relays communications with the application section, and the application section comprises a call control communication section that relays communications with the radio communication section, a separation detector that detects separation of the radio communication section, a second power source supplier which supplies power to the radio communication section, and when separation of the radio communication section is detected, halts supply of the power to the radio section, and a second CPU that halts communications to the radio communication section when separation of the radio

communication section is detected (Fig. 3 and Col. 5, line 6-Col. 5, line 11 of Silver et al.).

It would have been obvious to one of ordinary skill of the art at the time the invention was made to incorporate a network that employs CDMA access techniques, as taught by Silver et al., in the telecommunications system with a multi-carrier telephony transport of Dapper and the radio telephone with a detachable pager system of Buhrmann et al., because Dapper and Buhrmann et al., already teach minimizing power consumption of the communication system, the power used at the remote units for the transport of data are all in one system.

The motivation of this combination would be the minimizing power consumption of the telecommunications system detachable telecommunication device with a multi-carrier telephony transport. Silver et al. teaches a method within a radio telecommunications network for delivering a telephone call to a mobile station having a telephone portion, a pager portion, and a relay switch between the telephone portion and the pager portion. Data indicating that the mobile station is capable of receiving standard paging messages from a paging network is recorded in a home location register (HLR) associated with the mobile station. The method enables a subscriber to turn off the telephone portion to conserve battery power. When a call is received in a cellular network for the mobile station, and the mobile station cannot be contacted, the cellular network requests an associated paging network to send a page to the pager portion. The paging network is requested to page the pager portion of the mobile station via a datalink from the cellular network.

The incorporation of detachable telecommunication device with a multi-carrier telephony transport with a method within a radio telecommunications network of delivering a telephone call to a mobile station having a telephone portion, a pager portion, and a relay switch between the telephone portion and the pager portion. The radio telecommunications network has a cellular network and a paging network would be to reduce mobile paging load on a radio telephone link. In addition, the mobile station would be more capable of receiving standard paging messages from the paging network; receiving the telephone call in the cellular network; determining whether the mobile station is inactive; and determining from the data in the HLR whether the mobile station is capable of receiving standard paging messages, upon determining that the mobile station is inactive.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Johnsonn et al. (US Patent 5909463) discloses a transceiver (5) for an asymmetric communication system such as asymmetric digital subscriber line (ADSL) includes a configuration register (71) defining operation at either a central office (CO) or a remote terminal (RT). The configuration register (71) includes a control bit (72) for selecting either CO or RT mode. The transceiver (5) includes a signal processing module (70) configured according to the state of the control bit (72). For example, a digital interface (70) converts transmit data into transmit symbols and converts received

symbols into receive data. The digital interface (70) uses a large memory (158) as a buffer in the transmit path and a small memory (160) as a buffer in the receive path in CO mode. In RT mode, the digital interface (70) uses the small memory (160) in the transmit path and the large memory (158) in the receive path. The selective configuration allows a single integrated circuit to be used in both CO and RT equipment.

Schwaller et al. (US Patent 6230026) invention relates in general to wireless communication networks (e.g. cellular and personal communication systems) and is particularly directed to an architecture used to support frequency hopping associated therewith.

Alberth, Jr. et al. (US Patent 6349216) invention generally relates to a high efficiency power amplifier system. More specifically, this invention relates to a load envelop following (LEF) amplifier system for efficient amplification in a linear modulation scheme.

Neumann et al. (US Pub 2002/0141441) discloses a wireless telephone that includes first and second baseband processors. The first baseband processor (GSM) functions as system master, and the second processor (TDMA) functions as system slave. The first baseband processor interfaces to system controls, such as power supply, man-machine interface (MMI), and the like.

Spiegel et al. (US Pub 2002/0150154) relates to a multi-mode receiver comprises a programmable baseband module to filter a modulated signal according to the characteristics of the receiving mode. The programmable baseband module may further comprise a programmable convolver capable of switching between the receiving modes

of the multi-mode receiver by programming an impulse response of a filter to the programmable convolver.

Darabi et al. (US Patent 7031668) discloses that an integration into a single IC including components such as filters and inductors. The controller for adaptive programming and calibration of the receiver, transmitter and LO generator. The self-testing unit generates is used to determine the gain, frequency characteristics, selectivity, noise floor, and distortion behavior of the receiver, transmitter and LO generator.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janelle N. Young whose telephone number is (571) 272-2836. The examiner can normally be reached on Monday through Friday: 10:00 am through 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Janelle N. Young/
Examiner, Art Unit 2618

/Nay A. Maung/
Supervisory Patent Examiner, Art Unit 2618